

BEES COLLECTED BY DR. H. M. SMITH ON TURTLE ISLAND
(KOH TAO), GULF OF SIAM.¹

By T. D. A. COCKERELL, *University of Colorado, Boulder, Colorado.*

Megachile penangensis, Cockerell.

Three females and one male. Previously known from a female collected on the Island of Penang, described in 1918. It is very like *M. umbripennis* Smith (*schauinslandi* Alfken), but the female is readily known by the very finely punctured abdomen, without the lateral white hair bands on apical half, and the upper part of clypeus and lower edge of supraclypeal area shining. The male is still more easily separated, by the pale fulvous hair covering the whole of the face, hiding the surface of the clypeus. The fifth segment of the abdomen is strongly rugose apically, and the sixth is obtusely bilobed. Anterior and middle tarsi thick, fringed with long pale hair behind; anterior coxae without spines. The hind tarsi have long pale hair in front.

The characters of the male clearly indicate affinity with the Philippine *M. laticeps* Smith and *M. mcgregori* Cockerell, the three species being separable thus:

Apical half of abdomen with more or less entire pale fulvous hair-bands.....	<i>laticeps</i> Smith
Apical half of abdomen with hair bands or lateral rudiments of them pure white.....	1
1. Thorax above thinly covered with fulvous hair; apical lobes of abdomen longer.....	<i>mcgregori</i> Cockerell
Thorax above thickly covered with bright ferruginous hair.....	<i>penangensis</i> Cockerell

The male *M. penangensis* has white hair bands at sides only of third segment, and right across, but very thinly, on fourth.

Megachile atratiformis sininsulæ, n. subsp.

Female.—Smaller, length about 16 mm. (instead of 20); clypeus densely rugoso-punctate all over, with a faint median keel, lower margin shining, slightly depressed in middle; scutellum densely and coarsely rugoso-punctate, hardly shining; labrum broadly rounded at end, but neither aureo-sericeous nor keeled. Perhaps a distinct species; although I have seen *M. atratiformis* Meade-Waldo in the British Museum, I have none to compare. From *M. atrata fulvipennis* Smith, which it closely resembles, it is easily known by the mandibles, the total absence of a beard of black hair on end of clypeus, the lack of the abundant erect black hair on last abdominal tergite, the conspicuously punctured upper

¹Koh Tao (=Turtle Island) lies off the east coast of peninsular Siam in latitude 10° N. and is the most remote island in the Gulf of Siam. It is about four and one-half miles long and two miles wide, covered with evergreen jungle, and uninhabited. It was visited December, 1926–January, 1927, and the bees herein listed were collected at that time.—H. M. Smith.

part of cheeks, and other characters. Two specimens were obtained. Meade-Waldo, in the British Museum, placed *M. shelfordi* Cameron, from Borneo, as a synonym of *M. atrata* Smith. This is not correct, as I have examined the type at Cambridge University, and find it to be a species very closely allied to *M. atratiformis*. From *M. a. sininsulae* it is known most easily by the rufous hair on under side of middle tarsi, this hair being black with a faint rusty tint in *sininsulae*. Cameron says of *M. shelfordi*, "clypeus smooth and shining above middle;" I found it very rugose, with a faint keel at upper end.

Type.—Cat. No. 40455 U. S. N. M.

M. sarawakensis Cameron, also from Borneo, I saw in the British Museum. It looks like a small edition of *M. atrata*.

Megachile kohtaoensis, n. sp.

Male.—Length, about 10 mm.; robust, black, with dark reddish tegulae; eyes black; head broad; face and front with long reddish-ochreous hair, but upper part of clypeus exposed, with strong irregularly placed punctures, the middle near the upper margin with a round polished impunctate area; vertex well punctured but moderately shining, with thin erect red hair, at sides posteriorly with some black; cheeks with long creamy-white hair; mesothorax and scutellum dullish, closely but shallowly punctured; scutellum and (more thinly) middle of mesothorax with black hair, anteriorly and at sides the mesothorax has thin red hair; hair about tubercles dense and reddish fulvous, on mesopleura black, giving way to white below; sides of metathorax with dull white hair; wings with apical half dilute fuliginous, violaceous, base paler; anterior coxae with short spines; anterior tarsi rather stout but simple; hair of legs pale, very scanty, ferruginous on inner side of tarsi; spurs ferruginous; abdomen somewhat shining, shallowly punctured, white hair-bands represented by rudiments at sides of first four segments, not conspicuous; basal segment short, abruptly truncate basally, with very thin white hair; keel of sixth segment rounded, shallowly emarginate, with a depression above the middle, second and third ventral segments with conspicuous white hair-bands, first with white pubescence on apical part.

Type.—Cat. No. 40456 U. S. N. M.

Close to the Philippine Island *M. morrilli* Cockerell, which however differs by being much less robust, with paler wings, light hair on pleura, etc.

Anthophora korotonensis, Cockerell.

One female. It is desirable to have the male for identification in this group, but on comparison with *A. zonata* (L.) from India and *A. korotonensis* from the Philippines, the Koh Tao female agrees with the latter in the narrower emerald green abdominal bands, and the large well punctured black areas on clypeus. *A. korotonensis* also occurs in Formosa.

Trigona testaceitarsis, Cameron.

Two workers. Described from Patani, Malay Peninsula. Allied to *T. laeviceps* Smith from Aru Island.

***Crocisa insulicola*, n. sp.**

Male.—Related to *C. surda* Cockerell, from China, but dark band on disc of first abdominal segment short, not nearly reaching sides; blue at sides much wider than the apical band; hair of thorax shaggy, discal spots on mesothorax rather small; eyes brownish; hind femora shining, not toothed beneath; hind tibiae conical in outline, extremely broad at apex; basitarsi light-haired on outer side; apical band on first abdominal segment slightly constricted in middle; apical plate of abdomen with a straight edge, and no median tooth. Length of anterior wing, 9.5 mm. The blue markings are dull pale blue, the light hair on face and thorax is white with only a faint blue tinge; on outer side of middle tibiae the dense hair is white, suffused with blue basally; the light hair on hind tibiae is distinctly bluish, but hardly extends beyond the middle. The band on second abdominal segment is very deeply constricted in middle, those on segments three to five are widely interrupted. The scutellum is without spots, and the hind edge is W-like.

Type.—Cat. No. 40454 U. S. N. M.

***Crocisa pernitada basifracta*, n. subsp.**

Female.—All the light markings beautiful light turquoise blue, not shining. The dark area on first abdominal segment is straight right across basally, the basal blue with a narrow band-like median interruption (no interruption in typical *C. pernitada*); anterior margin of pleura black in middle; sides of black on first abdominal segment pointed instead of rounded; axillae blue-spotted; compared with *C. angulifera* Cockerell the blue marks on mesothorax posteriorly are much larger, connected with band over tegulae, and blue spots on disc of mesothorax much larger. Basitarsi blue-haired on outer side. Eyes deep reddish-brown. Scutellum W-like, without spots. No entire bands on abdomen.

Type.—Cat. No. 40453 U. S. N. M.

C. pernitada Cockerell is recorded from India and Burma. *C. tarsalis* (*C. nitidula* var. *tarsalis* Friese) is probably a different species, but I have no material.

AMERICAN PSYCHODIDAE—I (DIPTERA).

BY HARRISON G. DYAR.

Under this heading it is proposed from time to time as material may warrant to present structural details of various species of American Psychodidae. Following Tonnoir (Ann. Soc. Ent. Belg., lxii, 50, 1922), I place in *Psychoda* those species in which the antennal joints are bulbous at their bases, and in *Pericoma* those without this structure. The only other American genus is *Trichomyia* Curtis (= *Maruina* Müller), distinguished by lack of one of the long central veins.